Fitting Braided Brake Lines

Quite an easy task, the main two things to watch out for are to make every effort not to spill any brake fluid onto your paintwork and to take your time when bleeding the air out of the system.

Top Tip: Whenever you are working with brake fluid it is always a good idea to use an old rag to wrap around the area that you are working on, this should hopefully catch any accidental spills of brake fluid, saving your paintwork.

Step 1 – Empty the master cylinder

Carefully remove the two screws securing the cap of the front master brake cylinder, be sure to use a screwdriver with a head in good condition, as these screws are quite soft and easily damaged. Once the cap is removed drain the existing brake fluid from the reservoir by soaking it up with something absorbent (kitchen towel or even tampons are good for this).

Step 2 – Drain the calipers / brake lines

Next we need to drain as much fluid as possible from the brake calipers and the existing brake lines, this job is a lot cleaner if you attach a length of tubing to the bleed nipple so that you can drain the fluid into a suitable container (or a milk bottle). The bleed nipple is located at the top of the calipers (one for each), on the side nearest the wheel and you will need to use an 8mm spanner to loosen them (please note there is no need to remove the bleed nipple, just loosen it). Once the tubing is in place, open the bleed nipple and then work the brake lever until no more fluid come out of the caliper, then repeat the process on the other caliper.

Step 3 – Remove the existing brake lines

Starting at the calipers remove the banjo bolts securing the brake lines to the calipers, please be aware that there will still be some brake fluid in the lines so have a rag handy to soak up any dribbles, once these are removed undo the clamps that secure the brake line to the fork leg (near the mudguard) then proceed to the 'splitter' located on the fork brace (shown in photograph), rather than remove the brake lines from this at present it is easier to simply remove the two bolts holding the splitter onto the fork brace. When this is done remove the banjo bolt securing the brake line to the master cylinder and carefully take out the old brake line assembly. If you are fitting a set of braded hoses with two separate front brake lines then this whole assembly that you have removed can be discarded, if however you are fitting braded hoses that contain three front line (one from the master cylinder to the splitter and then two from the splitter to the calipers) you will need to remove all of the banjo bolts securing the existing brake lines to the splitter.

Step 4a – Fitting the new brake lines (two front lines)

Feed the two new brake lines down through the fairing towards the calipers, but do not attach them to the calipers yet, once this is done attach the top of the brake lines to the master cylinder with the bent connector located furthest from the master cylinder (so that it doesn't foul on the other connector). To connect the lines to the master cylinder you will need to use the long banjo bolt and sandwich the brake lines with copper washers. Starting from the master cylinder you should have a copper washer, the straight brake line connecter, another copper washer, the bent brake line connector (bending away from the other line) and another copper washer. Tighten the banjo bolt to the required torque (please note, when inserting banjo bolts it is NOT necessary to line up the wholes on the bolts to the holes on the brake line connectors). Once the top of the brake lines are secured ensure that the lines will not foul on anything and connect the bottom of the lines up to the calipers, again sandwiching the connectors with the copper washers. Once the lines are secured to the calipers install the clamps that hold the brake lines in place back onto the fork legs, do not be concerned if the clamps do not hold the brake lines securely, even though the clamps are loose around the brake lines they will still stop the lines drifting into the wheels.

Step 4b – Fitting new brake lines (three front lines)

Begin by replacing the splitter that you removed earlier back onto its mounting on the fork brace, then feed the first of the three new brake lines down from the master cylinder to the splitter (to work out which of the three new lines you should use measure them, the two lines that run from the splitter to the calipers should be the same length), then fasten the top of this line to the master cylinder with a new banjo bolt (please note when using banjo bolts there is NO need to try and line up the holes in the banjo bolts with the holes in the connectors), sandwiching the brake line connector with copper washers. Next connect the left hand side brake line (as you ride the bike) from the splitter to the left hand brake caliper, sandwiching both of the brake line connectors with copper washers. Once this is done connect the brake line from the master cylinder and the brake line running from the right hand side of the splitter to the caliper up to the splitter in the following order, working from the splitter you should have a copper washer, the brake line leading to the caliper, another copper washer, the brake line leading to the master cylinder and another copper washer. Connect this using the longest banjo bolt, then connect the right hand brake line up to the right hand caliper.

Step 5 – Filling up the system with new brake fluid

Before you refill the brake system ensure that all of the banjo bolts are tightened to the correct torque, confirm the bleed nipples on both front calipers are closed and always make sure that you use a new unopened container of Dot 4 brake fluid.

Begin by filling up the brake fluid reservoir on the front master cylinder to the max level, ensuring that you don't get any dirt and especially no water into the new fluid. Starting with one caliper you need to proceed as follows:

(1) Open the bleed nipple.
(2) Gently squeeze the front brake lever and hold it
(3) Close the bleed nipple
(4) Gently release the front brake lever

You need to repeat the above four steps until no more air comes out of the brake caliper, when you first start the above steps you will probably find that only brake fluid is coming out of the bleed nipple, this is quite normal as the caliper will still contain some of the old brake fluid, you need to keep going however until air starts to bubble out, then keep going a little while longer until only brake fluid comes out again. VERY IMPORTANT when

you are doing this please keep an eye on the level of the brake fluid in the front reservoir, if it gets close to the minimum level top it up to the max level immediately, if you do not do this you risk putting air into the system and then you will have to start bleeding the whole system again.

Once one caliper is finished ensure the bleed nipple is closed and then move on to the other caliper and repeat. When both calipers have been bled, top up the brake fluid level to max, then fasten the cap back onto the brake fluid reservoir, then work the brake lever to compress the brake fluid in the lines, this should only take a few squeezes on the brake lever to accomplish, if you find that you have worked the brake lever some twenty times or so and the lever still feels loose you will still have some air trapped in the brake lines, start again and bleed the system one caliper at a time.

Step 6 – Rear brake line

To replacing the rear brake line simply follow the same procedure as for the front brake lines, it is far easier to replace the rear brake line however as there is only one brake line and one caliper to work with. The bleed nipple for the rear caliper is located towards the rear of the bike on the top of the caliper. Access to the brake fluid reservoir for the rear brake requires removal of the right hand side panel just below the seat (shown below)

Hopefully these instructions should provide all of the information that you should require to enable you to install new brake lines to your Fazer 600. Should anyone find these instructions are either not clear enough, or contain any errors then I can be contacted via e-mail at FazerRacer@foc-u.fsnet.co.uk

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